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**INFORMATION WARFARE, PSYCHOLOGICAL OPERATIONS,  
AND A POLICY FOR THE FUTURE**

BY

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**Information Warfare, Psychological Operations,  
and a Policy for the Future**

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## **ABSTRACT**

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There is a growing interest within DoD concerning the advent of Information Warfare. This interest seems to center around two competing concepts of IW. First is the asymmetrical threat of information-based capabilities used against critical U.S. systems, and second, the burgeoning opportunities that a future Revolution in Military Affairs presents when based on the geometric growth of friendly information-based capabilities. Both analytical tracks seem to indicate that the U.S. must boldly and firmly grasp the potentialities embedded in the growing information age. Yet there are areas within the information environment that have not yet been addressed. Two such areas are a stated National policy for Information Warfare and the future strategic requirements and capabilities for the application of DoD Psychological Operations in support of our new Information Warfare policy. This paper addresses both issues and develops a point of departure for academic dialogue in these two extremely important and sensitive areas.



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## **INFORMATION WARFARE, PSYCHOLOGICAL OPERATIONS, AND A POLICY FOR THE FUTURE**

Since 1993, there has been a growing concern within the U.S. Department of Defense (DoD), the Joint Staff, the Services, and the Unified Commands regarding the asymmetrical threat and latent potentialities, both offensive and defensive, of Information Warfare (IW). As evidence of this, we have witnessed the development of directorates on the Joint Staff and within several Unified Commands dedicated to the analysis, application, and policy recommendations relating to Information Warfare. Further, we have witnessed a significant increase in books, publications, and Joint and Service doctrine devoted to this subject. Joint Publication 3-13, *Joint Doctrine for Information Operations* (1998) and U.S. Army Field Manual 100-6, *Information Operations* (1996) are recent doctrinal publications indicative of this trend. Concurrently, a great number of National and DoD level working groups, seminars, articles, think-pieces, and documents emerged to address the information age and the roles of various DoD agencies, disciplines, and capabilities inherent in such an age. As the concepts and definitions of Information Warfare, Information Operations, and Command and Control Warfare (C2W) worked their way through the inter-agency and the Joint Staff, many policy-makers at all levels attempted to grasp the impact of the concepts and operationalize the terms.

Although we now have approved joint definitions for such terms as Information Warfare, Information Operations, C2W, Information Dominance, computer network attack and defense, and other related terms there still seems to be an intellectual void in several areas regarding the above concepts. Most significant is the apparent lack of national policy concerning Information Warfare as well as an apparent void in doctrine concerning the command and control relationships and strategic capabilities required of the Info War "providers" on the future Joint battlefield. Further, a review of the literature and doctrine indicates a need for a thorough analysis of the force structure for, the strategic impact of, and the future application of DoD's Psychological Operations (PSYOP) capabilities.<sup>1</sup> Accordingly, this paper attempts to orient the reader to the emerging concepts associated with Information Warfare, review the pertinent literature on the subject, and present a proposed national policy for Information Warfare which will lay the groundwork for future IW strategy, resourcing, and force structure decision making. In addition, this paper will assess the role of Psychological Operations as a critical element of Information Warfare, and examine the future strategic impact and PSYOP capabilities required too meet that role. This paper will also attempt to prescribe a future Joint PSYOP force structure to meet those strategic needs.

## **BACKGROUND AND LITERATURE REVIEW**

As stated above, in recent years we have witnessed an explosion in interest and defense writings concerning Information Warfare. Foremost of these books and publications are the Joint Staff's vision for the future, *Joint Vision 2010*, which calls for a concept referred to as "Full Spectrum Dominance," integrating emerging information capabilities to leverage a smaller, more mobile joint force.<sup>2</sup> The 1994 publication of Winn Schwartau's book *Information Warfare* and his concept of "Class 3 Information Warfare" caused such a stir among strategic thinkers at U.S. Special Operations Command (USSOCOM) that Mr. Schwartau was asked to give an unprecedented professional development class on the subject to the officers and civilians of the USSOCOM staff.<sup>3</sup> Simultaneously, many in DoD observed the perceived ascendancy of the concepts of "The Third Wave" and "War and Anti-War" as set forth in Alvin Toffler's 1980 book, *The Third Wave* and Alvin and Heidi Toffler's 1993 book, *War and Anti-War*. In these books, the Tofflers describe the future environment in which the United States will have to act, the impact of the information revolution, and the onset of their postulated Third Wave and its impact on future warfare.<sup>4</sup> As these earlier books helped stimulate academic discourse on Information Warfare, many articles have since emerged to deal with the specific concepts of IW.

For an excellent overview of current DoD policy, concepts, and definitions concerning IW, one should go to a short article entitled "Update: Information Operations" in the October 1998 edition of the USACOM Joint Warfighting Center's newsletter.<sup>5</sup> Similarly, Lieutenant Colonel Donald E. Ryan, like most authors giving treatment to Information Warfare today, focuses on the electronic battlefield, the evolution of electronic warfare into Information-Based Warfare (IBW), and the requirement for new, smaller, electronic-based, and more effective force structures for the future.<sup>6</sup> The Commandant of the U.S. Army War College also fixes on the need to leverage electronic capability in order to increase speed on the future battlefield. This achieves what he believes is the true intent of combat... "*Yet the object of war is not to kill the enemy so much as to break his will to resist.*"<sup>7</sup> Finally, recent authors have even taken the idea of IW to the next step and have begun to call for modification of our principles of war in light of the impact of the emerging information age. Robert Leonhard, a former classmate at the U.S. Army Command and General Staff College, is one such author.<sup>8</sup>

In addition to the academic interest in Information Warfare, there is a great deal of literature focused on Psychological Operations as a critical element in affecting the will of our adversaries to fight. The purveyors of Psychological Operations in the United States Army have served as a critical element of the

strategic and operational art since the beginning of our nation. Further, several historical sources report the successful application of PSYOP in support of deception operations or in support of directly achieving the goals and objectives of the force well before the advent of the United States military.

Many view the teachings of SUN TZU in 500 BC as the first codification of the use of PSYOP to achieve strategic or operational goals. SUN TZU's admonishment... "*For to win one hundred victories in one hundred battles is not the acme of skill. To subdue the enemy without fighting is the acme of skill...*" is held up by modern US Army PSYOPers as evidence of the historical and strategic significance of PSYOP and deception in fighting and winning wars; particularly in light of our nation's growing desire to win with little or no casualties.<sup>9</sup> This perspective has been successfully implemented throughout US history as military commanders, faced with dangerous and volatile situations, have turned to PSYOP techniques to subdue, demoralize, or otherwise compel the enemy to cease resistance.<sup>10</sup> Further, evidence indicates that PSYOP is effective in this role at the strategic level as well as at the operational and tactical levels. Revolutionary War fighters used leaflets to encourage British soldiers to drop their arms and seek land and a new life in the nascent United States.<sup>11</sup> Unfortunately, these successes were apparently not followed up during the U.S. Civil War; however, many point to Abraham Lincoln's

Emancipation Proclamation as a stroke of extremely successful strategic PSYOP.<sup>12</sup> PSYOP leaflets were also effectively used to demoralize German frontline troops in World War I.<sup>13</sup> Psychological Operations, as a warfighting discipline, seemed to reach its height during World War II where the U.S. witnessed the formation of company and battalion sized PSYOP units and the extremely successful integration of PSYOP techniques with deception operations.<sup>14</sup> Stephen Pease also makes this point as he explores the application of PSYOP in the Korean War.<sup>15</sup> Similar assertions can be made for the successful application of PSYOP in all modern US interventions. Some would assert that US counter-insurgency doctrine, combined with the successful application of PSYOP, achieved many of our nation's operational goals in the early phases of our intervention in Vietnam.<sup>16</sup> Finally, we see the extremely successful application of psychological operations in support of the Joint and Combined force during Operations DESERT SHIELD and DESERT STORM in Kuwait and Southern Iraq.<sup>17</sup>

### **THE PROBLEM**

It is broadly accepted within the Department of Defense that Information Warfare is the glue of an emerging Revolution in Military Affairs (RMA). Similar to how machine guns and tanks forever changed the face of war in World War I, Information Warfare will forever change the face of warfare of the early 2000s and

beyond. Further, the burgeoning literature focused on Information Warfare uniformly states that PSYOP is an integral part of future success on the battlefield. The Joint Chiefs of Staff sponsored exercises at the Joint Task Force Level (JTF) have aggressively integrated Information Warfare and PSYOP within approved simulation models. Further, emerging Joint doctrine on Information Warfare and Command and Control Warfare firmly integrates PSYOP as an element of the successful attainment of "Full Spectrum Dominance."<sup>18</sup> Unfortunately, Joint and Army PSYOP doctrine and force structure has not kept pace with the concept of Information Warfare. There is a significant concern within the PSYOP community over the lack of doctrine addressing the command and control relationships and coordination methods between the elements of Information Warfare and the service components within the Joint Task Force.<sup>19</sup> Further, the emerging literature seems to assume that PSYOP capabilities will continue to expand in step with the capabilities of information systems and that DoD will develop future PSYOP capabilities and force structure to ensure that PSYOP will successfully meet the Information Warfare challenge of the next millennium. However, few authors have investigated the strategic requirement for PSYOP in the next century, or have addressed a force structure concept for the future. Further, a review of the future resource programs on the USSOCOM approved budget priority lists quickly indicates that the future of U.S. Army PSYOP will not

look much different from the capabilities and techniques that were available to the PSYOP commander of the Gulf War.<sup>20</sup> As Information Warfare matures as a discipline, we must now set forth future policies for IW and develop the strategic role of psychological operations within the concept of "Full Spectrum Dominance" as an integral part of *Joint Vision 2010*. This must be accomplished while incorporating a concept for future force structure, capabilities, and command and control doctrine. Within the context of our nation's military strategy for the next 15-20 years, this paper asserts that understanding the nature of future war and inculcating a firm belief that attacking the adversary's will to fight is key to avoiding future armed conflict and in maintaining the US strategic position within the world.

#### **THE RMA AND A PROPOSED POLICY FOR IW**

Concurrent with the explosion in academic writing concerning the emerging information age, we also see a great deal of academic treatment of an emerging Revolution in Military Affairs (RMA) tied to the growth in information age capabilities. The genesis of this explosion seems to be in the underlying belief that a certain "critical mass" of information capabilities combined with new, technologically enhanced weapons systems will usher in the advent of a Revolution in Military Affairs.<sup>21</sup> And along with this predicted RMA comes a requirement for U.S. policy and strategy to "get ahead" of this RMA to

ensure future U.S. security interests and continued U.S. predominance well into the 21<sup>st</sup> Century in such areas as international and economic relations. This assertion is strongly supported by the 1997 U.S. National Security Strategy that states:

"We seek to create conditions in the world where our interests are rarely threatened, and when they are, we have effective means of addressing those threats. In general, we seek a world in which no critical region is dominated by a power hostile to the United States and regions of greatest importance to the U.S. are stable and at peace. We seek a climate where the global economy and open trade are growing, where democratic norms and respect for human rights are increasingly accepted and where terrorism, drug trafficking and international crime do not undermine stability and peaceful relations."<sup>22</sup>

This concern for "getting in front" of an emerging, information-based RMA derives from three of four basic U.S. National Interests as identified by Nuechterlein; (1) defense of the homeland, (2) economic well-being, and (3) favorable world order.<sup>23</sup> The idea is that U.S. predominance in a future RMA will ensure the continued security of the U.S. and her strategic allies throughout the world, a growing and stable economy characterized by free and open trade, and a world order which supports democratic ideals and finds no benefit in imperial or hegemonic activity. Further, these National Interests support our core National Values of freedom, democracy, security, capitalism, open markets, human rights, and rule of law.

In pursuit of this goal of "riding the bow wave" of the next RMA few, if any, policy-makers have attempted to grasp the impact of these concepts and develop a cohesive policy for Information Warfare. Some analysts view the concept of Information Warfare as similar to the concept of Air Power in Douhet's time. In other words, a concept of great potential, but one that will be mitigated by yet to be developed technologies and doctrine. Simply stated, these analysts believe that Information Warfare is just another facet of the evolution of the application of combat firepower on the battlefield.<sup>24</sup> Assuredly, Information Warfare concepts do seem to offer great potential for future success on the battlefield as well as opportunities for success within an increasingly complex and threatening peacetime environment. Conversely, it seems that the U.S., arguably the most dependent on information age technologies, must ensure the future security of our information-based systems and potentially, our allies information-based systems. Therefore, it becomes imperative that we explore the current policy for Information Warfare and set forth a cohesive, integrated, and feasible policy for Information Warfare out to the year 2015. In accomplishing this, this paper will also develop broad statements of information ends, ways and means for our nation to follow on its

path to predominance in the strategic environment of the 21<sup>st</sup> Century.

The Department of Defense in its Joint Publication 1-02 has adopted two definitions that are helpful to us in understanding the concepts of Information Warfare. The first is the definition of Information Warfare and the second is the definition of Command and Control Warfare. Both of which are related to the overall successful application of information on the field of future conflict. Information Warfare in the referenced publication is defined as:

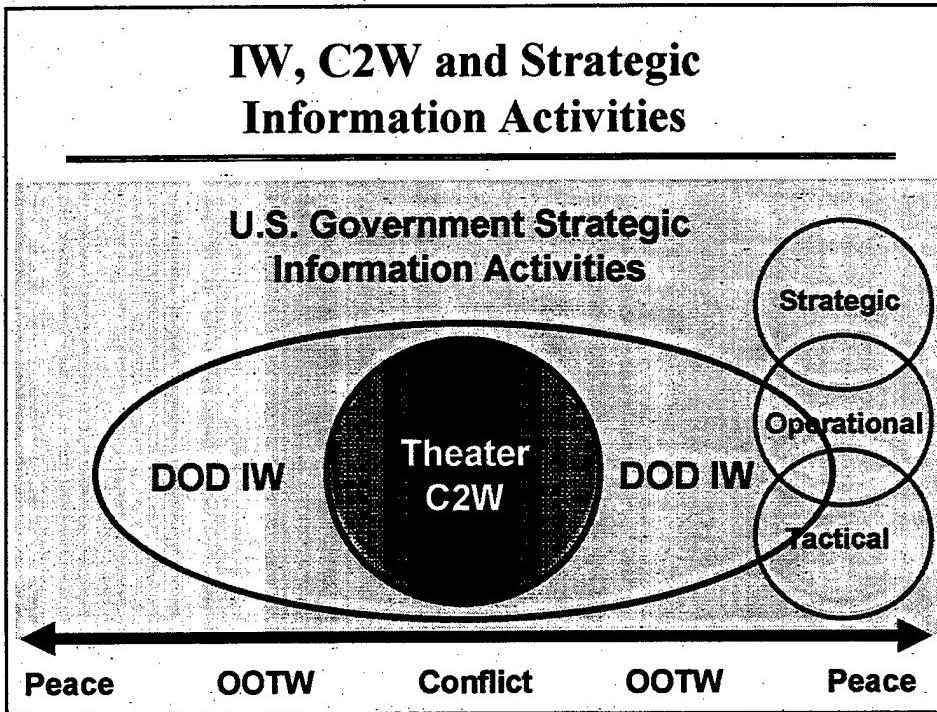
**Information Warfare** - Actions taken to achieve information superiority by affecting adversary information, information-based processes, information systems, and computer-based networks while leveraging and defending one's own information, information-based processes, information systems, and computer-based networks. Also called IW.<sup>25</sup>

While Command and Control Warfare in the same publication is defined as:

**Command and Control Warfare** - The integrated use of operations security, military deception, psychological operations, electronic warfare, and physical destruction, mutually supported by intelligence, to deny information to, influence, degrade, or destroy adversary command and control capabilities, while protecting friendly command and control capabilities against such actions. Command and Control warfare is an application of information warfare in military operations and is a subset of information warfare. Command and control warfare applies across the range of military operations and all levels of conflict. Also called C2W. C2W is both offensive and defensive: a. C2-attack. Prevent effective C2 of adversary forces by denying information to, influencing, degrading, or

destroying the adversary C2 system. b. C2-protect. Maintain effective command and control of own forces by turning to friendly advantage or negating adversary efforts to deny information to, influence, degrade, or destroy friendly C2 system.<sup>26</sup>

As is readily evident, the two definitions are interrelated and seem to operationalize the concepts at both the strategic and operational levels of war. A quick analysis of these definitions indicate that Information Warfare (and its more politically correct and peacetime oriented synonym -- Information Operations or IO) is an overarching coordination of all facets of information to significantly impact on an adversary's ability to impose his will in either a future peacetime or conflict environment. From this point the future vision and policy of IW becomes a bit hazy. However, it is clear that Command and Control Warfare is a subset of IW and its application seems to focus at the operational level of war, coordinated and executed by the appropriate Combatant Commander. The following figure may be helpful in understanding the strategic and operational aspects of the two concepts in relation to the spectrum of conflict and the three levels of warfare.



**Figure 1: Information Operations in the Strategic Environment**

With this as our backdrop, this paper will now focus on the development of a policy for Information Operations out to the year 2015.

As any future policy must address the environment for which that policy was designed to shape, this paper supports the 1998 Strategic Assessment and authors like Steven Metz when they postulate variations of a future described as a "trisectioned global security" environment. This environment is characterized by three distinct "tiers" or forms, roughly paralleling the concepts of the First World, Second World, and Third World states of today.<sup>27</sup> The implications of this future environment, as Metz postulates, would require policies that pursue the

future RMA as described earlier and which actively seeks supremacy in information age strategy, technology, and doctrine.<sup>28</sup> Accordingly, continued information age supremacy and the leveraging of a developing RMA would be required to offset asymmetrical threats in the third tier and contain the growing weapons of mass destruction capabilities and expanding conventional armies of the second tier.

Before we develop an Information Operations policy for the future, we necessarily need to examine our current policy for IW. As stated earlier, consideration of information-based strategies and policies is a fairly recent phenomenon. A quick analysis of the extant policy statements regarding IW/IO reveals a lack of a cohesive and integrated policy. However, it is helpful to examine the current policy, in whatever form, and determine if it is satisfactory for the future security interests of the United States. To accomplish this, this paper examines four documents which should serve as policy or strategy documents for future IO concepts and capabilities. These documents are; (1) the 1997 National Security Strategy, (2) the 1998 Strategic Assessment, (3) the 1997 Report of the Quadrennial Defense Review, and (4) the Report of the National Defense Panel.

In reviewing our current National Security Strategy we find that it only dedicates a short paragraph to "information

infrastructure" within its *Overarching Capabilities* paragraph. Further, this paragraph only focuses on U.S. dependency on our information infrastructure and the requirement to "protect and defend" that infrastructure.<sup>29</sup> It fails to address the broader requirement of offensive information capabilities and the necessary "ways" and "means" to accomplish the strategy. It also fails to develop broad guidance for security strategists to follow in the development of an information-based strategy.

Similarly, the 1998 Strategic Assessment also focuses on information defense related issues while only alluding to the potential of offensive-based information capabilities. Initially, the 1998 Strategic Assessment examines our current superiority in information technology and indicates how this superiority enhances our intelligence systems in such a way that we may avert or respond to crisis in a timely and appropriate manner. Further, the Assessment analyzes the critical role of information operations in small-scale contingencies. Finally, the Assessment discusses the strategic "ends" of successfully countering Information Warfare while ensuring a Minimum Essential Information Infrastructure (MEII). To ensure a MEII, the Assessment discusses several "ways" or concepts for the future such as; (1) developing a capability to "seize control of a portion of the national or global information infrastructure, to ensure continuity of military operations during a Major

Theater War in which an opponent conducts a strategic IW campaign," (2) provide "tax or other incentives to owners and operators of the National Strategic Infrastructure to build robust systems...," and (3) "...development of advanced silicon-based weapons systems coupled with focused logistics produces emerging vulnerabilities" that yet need to be addressed.<sup>30</sup> Again we find a significant absence of ends, ways, and means for an offensive information capability.

In that the 1998 Strategic Assessment used the 1997 Quadrennial Defense Review (QDR) as their baseline for analysis, we also assume, and subsequently find, that the QDR fails to establish requirements for future offensive information-based capabilities. As evidence of this we find three fairly robust paragraphs which give a detailed treatment of defensive Information Operations proceeding the following statement on offensive information capabilities. "Offensive actions to disrupt our adversary's access to information are also a part of U.S. military capabilities. Such capabilities will be increased in the future to ensure that the United States maintains information superiority during conflict."<sup>31</sup> As one can easily see, this statement gives no broad statements of "ways" and "means" to accomplish the stated offensive "end."

Finally, we turn to the 1997 Report of the National Defense Panel as an example of a proposed policy statement that attempts

to incorporate all the required future capabilities for Information Operations. Initially, the Report also focuses on IW defense as the predominate requirement for the future. However, it quickly moves to the requirement for offensive Information Operations and lays outs strategic concepts for an information-based offensive capability. Accordingly, the report calls for exploitation of advancement in commercial information technology, conversion of that technology into military capability and the development of effective defensive and offensive information capabilities. Finally, the Report asserts that "significant improvement in the application of military force will be achieved by electronic strike capability. We need to develop the ability to insert viruses, implant "logic bombs," conduct electromagnetic pulse and directed energy strikes, and conduct other offensive electronic operations."<sup>32</sup> Although, the Report does address the requisite future offensive information-based capabilities, it focuses primarily on electronic offensive means to the exclusion of message-based or perception management information systems. Further, it doesn't go far enough in establishing guidance for future offensive IW capabilities.

In a future environment of information capabilities combining with new technologies to create a RMA, what policy should we pursue to ensure our requisite political predominance and military supremacy? It seems obvious from the discussion

above that current policy statements have not gone far enough to adequately develop an effective IO strategy to address the postulated trisected environment of the future. From the outset, it is necessary to envision a policy which incorporates, coordinates, and integrates not two but three facets of Information Operations; (1) defensive IO, (2) offensive IW, and an area not yet discussed, (3) perception management IO. In accomplishing this, the policy also needs to focus on the development of capabilities that span all the elements of power in both peace and in conflict.

### **THE POLICY**

In the area of defensive IO, the proposed policy would advocate the establishment of a virtual defensive information perimeter around our future critical economic, diplomatic, military, and civilian information infrastructure. This perimeter would include the combined and coordinated efforts of our national law enforcement agencies, our national intelligence agencies, our military defense capabilities, and our national and allied scientific and computer industries to ensure a stable and secure information environment. Similar to World War II, when industry, defense, and our citizenry worked together to achieve a strategic goal, we must again develop a military-industrial complex. Only this information age complex must leverage the capabilities of the information industry instead of

the capabilities of the industrial revolution. Obviously, to accomplish such integration, we must now examine the benefits gained from actions such as harassing organizations like Microsoft with anti-trust legislation.

The above being our defensive IO "ends," we now need to focus on the "ways" or concepts involved in achieving these ends. Initially, we must leverage emerging technology and apply it to a defensive IO mindset. This would include tax and scholarship benefits focused on the development of defensive IO applications. Additionally, we must build defense and industry partnerships focused on the development of these required capabilities. Further, we must establish redundant critical systems that are involved in activities that support or guarantee our vital national interests, in all facets of life. Finally, we must continually evolve existing Command, Control, Communications, Computer, and Intelligence (C4I) systems apace with emerging, off the shelf information technology.

Eventually, we must develop a type of virtual "reactive armor" for critical U.S. information systems. This armor would immediately identify and respond in kind to any entity attempting to penetrate, corrupt, or destroy a critical U.S. or allied information system. The deterrent effect of this armor could potentially cease the advent of new viruses or hackers upon the publication of such a capability. The development of

such a "reactive information armor" would also require changes to existing U.S. laws. Finally, we must look to integrating future conventional defensive capabilities to protect vital information infrastructure. An example of this would be adapting emerging theater missile defense technology to protect our fleet of Global Positioning System satellites.

In the realm of offensive IW the proposed policy supports dedication of significant activities and resources focused on the development of the offensive IW capabilities as outlined in the discussion on The Report of the National Defense Panel above. This represents a good start in the area of offensive IW; however we must not limit ourselves to the development of "viruses, "logic bombs," electromagnetic pulse and directed energy strikes, and other offensive electronic operations." We must go the next step and learn how to integrate such systems as precision guided munitions or SOF with offensive IW capabilities to affect adversarial IO/IW capability with little or no signature. Further, we must develop capabilities which, when covertly integrated into adversarial systems, replace adversarial information with information of our choosing without adversarial knowledge. In a similar vein, we must develop capabilities that can "turn-off" adversarial systems from great distance without causing the actual destruction of those systems or causing unnecessary destruction to non-combatants or

resources. We must also begin to break with tradition and explore the possibilities of unmanned aircraft and land combat vehicles with the operators securely ensconced within a "virtual" tank or plane somewhere deep within a Colorado mountainside. This capability could be enhanced with extreme long range artillery or smart bombs fired from stand-off distance well outside the range of adversarial capability. Finally, we must address our organizational structure, both in the governmental and military worlds, for planning, integrating, and conducting both offensive and defensive IW. To date, our planning and integration efforts have been characterized by the formation of *ad hoc* cells at the national, DoD, Joint Staff, or Unified Command levels with no ability to integrate and plan for IW capabilities. It now may be time to examine the development of a Joint Military IO command and control structure with a civilian equivalent at both the OSD and national levels.

Finally, we must develop a policy for message-based or perception management Information Operations. This area, although extremely sensitive in an open, democratic society, promises great potential for attaining U.S. strategic objectives. Evidence of this potential lie in the successful application of information to achieve U.S. objectives with little or no violence and loss of life. The U.S. ability to "call-back" our "invasion" of Haiti serves as a recent case

study of this capability. Simply stated, it's the timely and effective promulgation of a national message and supporting information that influences and shapes the emotions, attitudes, beliefs, and behaviors of a strategic population or audience so as to avoid or reduce the potential for conflict while supporting U.S. National goals and objectives. Currently, this is attempted at the National level by a loose confederation of indications and messages based on press guidance or a general understanding of U.S. objectives in a specific area. What is needed and advocated by this paper is an integrated perception management information structure that spans the current Administration, Department of State, Department of Defense, Department of Commerce, The Joint Staff, and the Unified Commands. This integrated structure would serve as a coordination element with the goal of "getting in front" of potential conflict by focusing on projecting U.S. policy and possible responses in affected areas of the world. In this manner, "the message" becomes a tool or weapon to use in support of U.S. National policy while serving as a deterrent to potentially dangerous adversarial forces. In addition to this infrastructure, DoD must further develop a joint perception management or PSYOP infrastructure that more comprehensively supports the NCA, the Joint Staff, and the Combatant Commanders

as they become fully engaged in the emerging environment of tomorrow.

In the projected future world of a trisected global security environment, the need for a cogent, integrated, and comprehensive information policy is essential. Such a policy must support U.S. National values and protect U.S. vital and important interests against potential economic encroachments of first tier states, emerging peer competitors or weapons of mass destruction in second tier states, and random acts of violence and terror from third tier states. Leveraging emerging information capabilities enables our future society to better shape the environment, avoid future conflict, blunt threats to peace and security, ensure the viability of our economic and governmental systems, and serves to enhance a growing environment that encourages democracy and free and open trade among nations.

#### **THE FUTURE ENVIRONMENT AND THE REQUIREMENT FOR JOINT PSYOP**

An analysis of the future global environment as postulated by Metz and the Tofflers and a quick review of our military interventions since the close of the 1991 Gulf War indicates growing NCA directed DoD involvement in peacetime stability and contingency operations. Somalia, Bosnia, Hurricane Mitch, and Kosovo serve as timely evidence of this assertion. This

phenomenon seems to be an outgrowth of U.S. ascendancy in the international arena. The distinct lack of ideologies and governmental systems openly hostile to U.S. beliefs and practices has brought about the advent of a *pax americana* that is without equal in modern history. However, with this newfound ascendancy and central world role, the U.S. has accepted the burden of world stabilization. Many would argue that this is not a role for the U.S. military. However, history indicates that the U.S. military has served in this role between every major conflict of the 20<sup>th</sup> century, although not at the global level. Now we are at a point in U.S. history where we must accept the dictum "if you want to be the leader, you must lead." And in the late 20<sup>th</sup> Century and the early 21<sup>st</sup> Century, we have asked for the role of world leader, and have won the title. Unfortunately for the U.S. military, the implications of this role are significant. We can no longer hide in the training areas of our Ft. Braggs, Ft. Hoods, or our National Training Centers and prepare for the big, industrial-based battle of the future. As the U.S. military is the only capability within the U.S. Government that can go there and do the "stability" thing, it must accept that role. The U.S. people expect something from their DoD dollar, and without the monolithic threat of the Soviet Union, stability is what they expect.

Therefore, as stated above, the implication for the U.S. military in this future role is great. First and foremost, we must

build capability to intervene, stabilize, and create long term peace on this 21<sup>st</sup> Century peacemaking field. Further, our current future vision, *Joint Vision 2010* indicates that the decisive, timely, and effective application of information will play a critical role in all future DoD operations, no matter the nature of those operations. Concurrently, a review of our potential future theater strategies indicates a requirement for increased U.S. Military intervention to support peacetime stability or contingency operations while maintaining a capability to prosecute a Major Theater War (MTW). Within this framework, this paper asserts that the need for new, unconventional skills will evolve to ensure success on the stabilization fields of the future.

Psychological Operations is clearly recognized as one such skill or capability for the future.<sup>33</sup> Accordingly, this paper asserts that PSYOP will continue to serve as a critical pillar of the Information element of National Strategy. The timely, thorough, and effective application of Psychological Operations is imperative to meet any successful future regional strategy in this era of declining DoD resources. Unfortunately, within the framework of an information revolution, many are uncertain as to the very nature of PSYOP and how such a limited, 19<sup>th</sup> Century discipline can assist in the struggles of the 21<sup>st</sup> Century.

Simply stated, PSYOP is the Commander's ability (at whatever level, from the NCA down to the tactical) to use media techniques

to influence the attitudes, beliefs, emotions, and behavior of a friendly foreign, host nation, adversarial, or enemy force. It is the Commander's only true ability to communicate with the enemy within the language and the culture of the enemy force. Where the large majority of treatments of Information Warfare focus on the "medium" or electronic basis of communication, PSYOP focuses on the "message" of communication. The two figures below help to clarify this fundamental difference between the electronic world of IW and the cultural and linguistic based world of PSYOP.

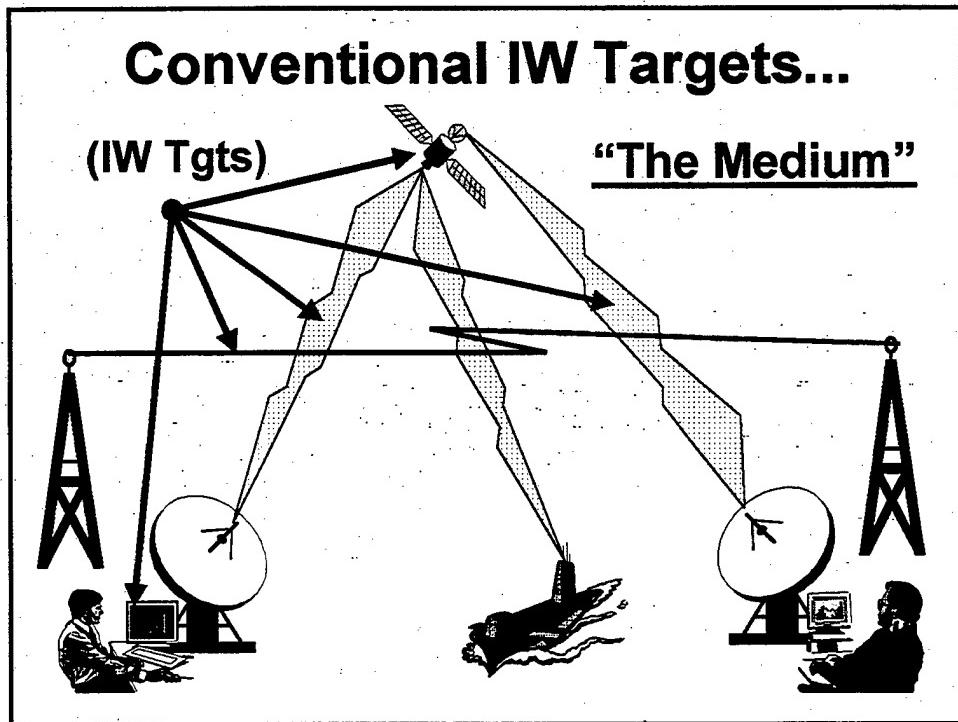
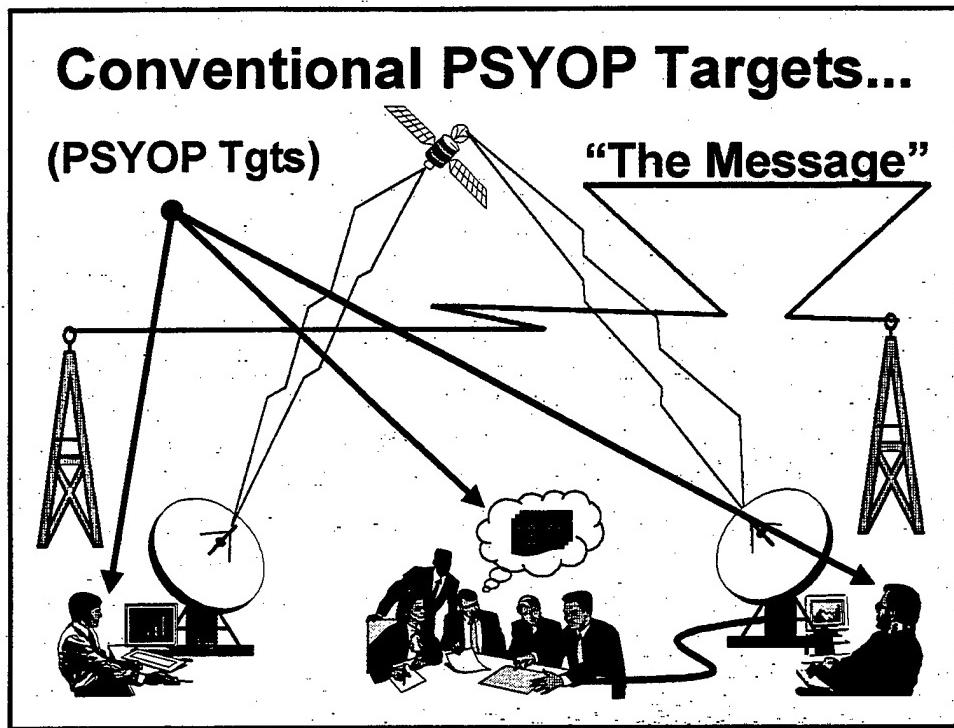


Figure 2: Prevailing DoD Concept of IW



**Figure 3: IW Related PSYOP Target Sets**

In addition to the above, three definitions from the DoD Dictionary give a general idea as to the nature of psychological operations and its use in support of the NCA, the Joint Staff, and the Combatant Commanders.

**Psychological Operations** - Planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately the behavior of foreign governments, organizations, groups, and individuals. The purpose of psychological operations is to induce or reinforce foreign attitudes and behavior favorable to the originator's objectives. Also called PSYOP.<sup>34</sup>

**Psychological Warfare** - The planned use of propaganda and other psychological actions having the primary purpose of influencing the opinions, emotions,

attitudes, and behavior of hostile foreign groups in such a way as to support the achievement of national objectives. Also called PSYWAR.<sup>35</sup>

**Overt Peacetime Psychological Operations Programs -** Those programs developed by Combatant Commands, and in coordination with the chiefs of U.S. diplomatic missions, that plan, support, and provide for the conduct, during military operations other than war, of psychological operations in support of U.S. regional objectives, policies, interests, and theater military missions. Also called OP3.<sup>36</sup>

As can be ascertained from the above definitions, the current and future role of PSYOP takes on great importance in this emerging age of peacetime stabilization and political sensitivity.

However, the DoD PSYOP Force Structure is extremely small and is not designed to provide the indicated timely and dedicated support to the NCA, U.S. Embassies abroad, and the Combatant Commanders.

The current active Army PSYOP Force Structure consists of one active PSYOP brigade (or Group in Special Operations Forces (SOF) parlance) of five active PSYOP battalions. Of those five battalions, only three, regionally oriented, strategic battalions provide dedicated peacetime and wartime PSYOP support to the Combatant Commander. One battalion provides worldwide tactical PSYOP support (loudspeakers) and one battalion provides worldwide print and broadcast dissemination support. None of the five active battalions have more than 350 personnel assigned and the strategic battalions only average 180 personnel assigned. In addition, one of the three strategic PSYOP battalions shares

responsibilities for both the U.S. Pacific Command and U.S. Central Command Areas. This structure seems particularly untenable since our two postulated, near simultaneous major theater wars occur in these areas.

Concurrently, the U.S. Army reserve PSYOP force structure consists of two tactical PSYOP brigades of three tactical PSYOP battalions (loudspeakers) each. The reserve PSYOP force structure is primarily designed to provide tactical support to all maneuver Corps deployed in two, near simultaneous MTWs -- not to provide strategic long-term peacetime or stability/contingency support to a theater CINC. There is also a print and broadcast dissemination PSYOP battalion in the reserve force structure for the purpose of providing print and broadcast dissemination assets for the second, near simultaneous, MTW.

The current U.S. Air Force PSYOP force structure consists of one EC-130 (COMMANDO SOLO) Special Operations Group in the Pennsylvania Air National Guard consisting of six PSYOP broadcast platforms that provide a dedicated, airborne PSYOP broadcast capability on all radio frequencies and on worldwide color TV. Although, this Air National Guard unit has never failed to answer the call of its nation to provide dedicated PSYOP support throughout the world in peace and war, we have treated this unit like an active duty unit in terms of repeated, long-term deployments.

Finally, at the Department of State level, the U.S. has developed a peacetime, strategic PSYOP capability - the United States Information Agency (USIA), with the mission of providing US Ambassadors abroad with an internal media capability designed to influence host nation audiences of the benefits of U.S. objectives in-country. During the early years of USIA and U.S. Army PSYOP, these two organizations worked very closely together to achieve attitudes favorable to U.S. objectives in a given foreign state. Unfortunately, the Vietnam War and an attempt to downsize or eliminate USIA by both the State Department and Congress has led to a situation where USIA and PSYOP rarely, if ever coordinate their efforts in-theater.

The organizations and force structure outlined above are the totality of all DoD force structure for Psychological Operations. Further, all PSYOP forces are within the legislated responsibilities of United States Special Operations Command (USSOCOM) and are normally placed under the operational control of the theater Combatant Commander while supporting a combat, stability, or peacetime operation.

Finally, there is no joint force or agency designed to provide Joint PSYOP support to the Combatant Commander. Joint Doctrine calls for the application of a Joint PSYOP Task Force (JPOTF) under the Combatant Commander or a subordinate Joint Task Force Commander to provide effective PSYOP support in peacetime,

contingency, or war.<sup>37</sup> The only peacetime command element available to stand-up a JPOTF is the active Army, regionally oriented, strategic PSYOP Battalion apportioned to a specific theater. The above force structure combined with a lack of a Joint PSYOP Command & Control element to provide joint training and integration indicates a significant shortfall in PSYOP forces to support the requirements of DoD and the future Unified Commander. Along with the above organizational shortfalls, the following points indicate additional concerns regarding the DoD PSYOP force structure that we are depending on to serve as a critical element of our future Information Warfare capability:

- PSYOP's organization under USSOCOM is mandated by the Nunn-Cohen Amendment to the Goldwater-Nichols Defense Reorganization Act of 1986. This makes it extremely hard to change command and control relationships, even if DoD and USSOCOM desired such a change.
- The above legislation does not specify joint command & control of PSYOP forces.
- PSYOP forces do not seem to compete as well as Special Forces and SOF aviation units in the USSOCOM Major Force Program 11 (MFP11) appropriation. Evidence of this can be seen when one examines the robust nature of Special Forces, SOF Aviation, Navy SEAL, and Civil Affairs units compared to U.S. Army PSYOP units.
- The three, one of a kind, regionally oriented, strategic PSYOP battalions that are apportioned to the four Combatant Commanders are only authorized approximately 180 personnel. Of those personnel, only about 130 are PSYOP Officers or NCOs. This causes extreme hardship when providing rotational support to a long-term stability or contingency operation such as Bosnia.

- The Reserve PSYOP battalions, although extremely capable and effective, are not configured to provide long-term, regionally oriented, strategic PSYOP. Nor were the reserve PSYOP units designed to provide such long-term peacetime support.
- PSYOP forces must task organize to provide effective joint and service support to the theater CINC.
- There is no formal, Joint mechanism in-place to ensure effective interoperability between USAF and U.S. Army PSYOP. And there is no formal mechanism in place to ensure effective coordination between the U.S. Embassy, USIA, and in-country PSYOP forces.
- USAF PSYOP has no dedicated or organic product development capability. It must depend on close cooperation between themselves and the regionally oriented JPOTF in-theater.
- Future DoD Information Operations Strategy calls for increased integration and application of PSYOP to shape our strategic environment.

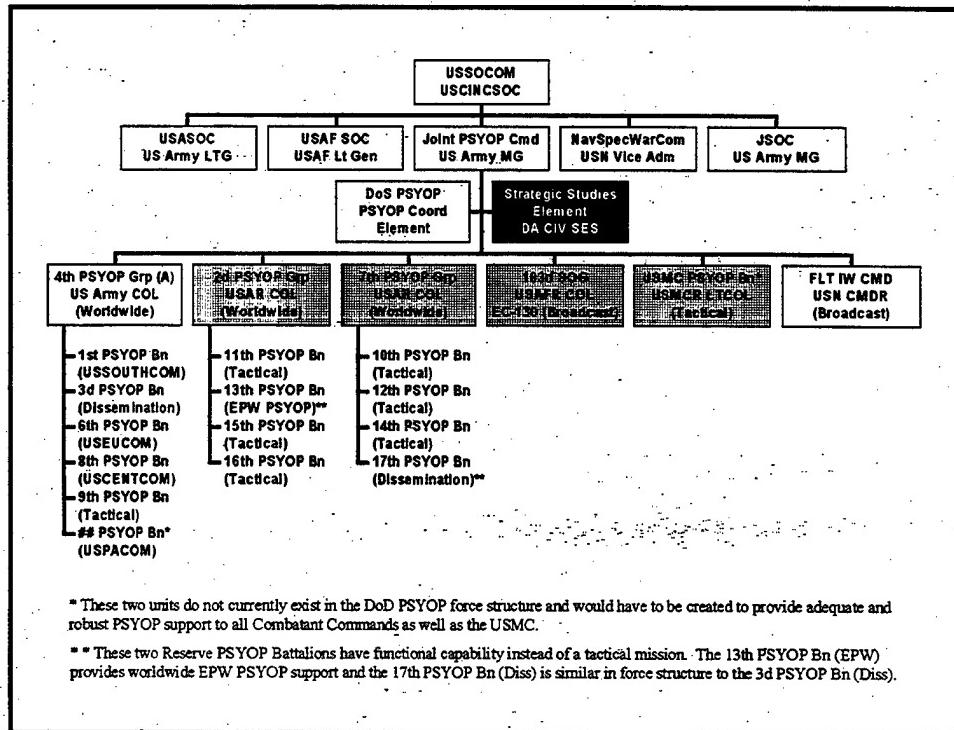
The growing requirement for timely, effective, and joint PSYOP support to the U.S. Government, DoD, and the Geographic CINC indicates a strong need for a Joint Psychological Operations command with assigned forces that are robust enough to meet the needs of the NCA, the Joint Staff, and the theater CINCs out to the year 2015. Further, DoD's future requirements for peacetime and contingency PSYOP support within the framework of *Joint Vision 2010* indicates a need for a fairly autonomous Joint PSYOP command with enough force structure to provide a dedicated, robust, fully capable, and effective Joint PSYOP task force to any theater on a near continuous basis.

## THE FUTURE PSYOP FORCE

What form should a future Joint PSYOP Command take if that is the requirement to support our future IW policy as well as to meet the future requirements of the Unified Combatant Commands? To develop a viable Joint force structure, one must look to existing SOF force structure to develop a model that meets our nation's future PSYOP needs. Accordingly, a few assertions are inherently true when examining similar elements in SOF force structure:

- 1) The Joint PSYOP Command needs to attain the status of a Component Command of USSOCOM to ensure appropriate funding and budgetary consideration.
- 2) The command needs to be commanded at the General Officer level to serve as a voice at the USSOCOM Board of Directors level.
- 3) Forces under the Joint PSYOP Command must remain regionally and linguistically oriented and apportioned to a Geographic CINC.
- 4) A peacetime operational control (OPCON) relationship must exist between the NCA and The Joint Staff and the Joint PSYOP Command.
- 5) The Joint PSYOP Command must have adequate force structure to perform long-term, peacetime stability operations without having to unreasonably draw on the Reserve PSYOP force structure.

With this in mind, one can now go about developing a force structure within the USSOCOM hierarchy that meets our future Information Warfare needs. The figure below indicates a proposed Joint PSYOP Command with assigned PSYOP units down to the battalion level.



**Figure 4: Proposed Joint PSYOP Command**

The above command is designed to interface directly with the earlier proposed policy for Information Warfare by developing existing OPCON and direct coordination relationships with those elements at the NCA/Joint Staff and Department of State level that focus on integrating our future national "perception management" IO capability. In addition, this proposal integrates all the DoD force structure for PSYOP under one command. In fact it goes further in this area by bringing in non-traditional PSYOP units such as the U.S. Navy Fleet Information Warfare Command whose mission is simply that of a

land-base broadcast station or by establishing a proposed U.S. Marine Corps tactical PSYOP battalion whose mission would be to provide the U.S. Marine Corps with tactical PSYOP support. This proposed joint force structure would also give the benefit of a robust force capable of providing fully trained and highly effective PSYOP support at all levels in peacetime, military operations other than war, and conflict while maintaining Service identity and relationships. The only drawback to the above proposal would be the increased manpower required to ensure the command had the forces necessary to provide adequate and appropriate support to long-term stabilization interventions.

#### **CONCLUSION**

Analysis of the Joint Staff's vision for the future quickly indicates that information superiority is critical to the success of our nation's military in the future. A growing reliance on information systems by both our own forces and the enemy is the catalyst for this assertion. Many would argue that to take down the enemies' information and weapons systems through the precise application of lethal and non-lethal fires is the key to future success on the battlefield. A countervailing argument would be that defeating the will of the enemy to fight is the true key to success in battle at all levels; strategic, operational, and tactical. The teachings of SUN TZU<sup>38</sup>, Liddell Hart<sup>39</sup>, and many

other great strategists would support this argument. While Information Warfare is concerned with the electronic medium, its protection, and its exploitation, PSYOP is concerned with the message our nation sends to our adversaries at all levels of war. The will to fight is a psychological manifestation of the adversarial soldier.<sup>40</sup> In many instances throughout history, soldiers have fought with courage and decisiveness while totally devoid of adequate manpower, ammunition, weaponry, or nation-state support. Such was the lot of the Jews at Masada and the Texans at the Alamo. Their decision to continue to fight was not based on a cost-benefit analysis of existing capabilities, their decision to continue the fight was based solely on their will to fight and die for a cause. During future joint intervention, PSYOP may be our nation's only capability to directly attack that will to fight outside of direct conflict. And our future seems to indicate intervention devoid of direct conflict. It seems imperative that we now develop a cogent and effective policy for Information Warfare as well as a future strategy and joint force structure for PSYOP as an element of our overall Information Warfare strategy.

Word Count - 7471

## ENDNOTES

<sup>1</sup> Winn Schwartau, *Information Warfare: Chaos on the Electronic Superhighway* (New York, NY: Thunder's Mouth Press, 1994), 354-366.

<sup>2</sup> Department of Defense, Joint Chiefs of Staff, *Joint Vision 2010* (Washington, DC: US Government Printing Office, 1996), 16-19, 25-27.

<sup>3</sup> Winn Schwartau, *Information Warfare: Chaos on the Electronic Superhighway* (New York, NY: Thunder's Mouth Press, 1994), 291-315. Information concerning both USSOCOM OPD sessions is based on the personal experience of the author who served as one of the action officers on the project.

<sup>4</sup> Alvin Toffler, *The Third Wave* (New York, NY: Bantam Books, 1981), 416-439 and Alvin and Heidi Toffler, *War and Anti-War* (New York, NY: Bantam Books, 1993), 73-96.

<sup>5</sup> LCDR Andy Wilde, USN, "Update: Information Operations," *A Common Perspective*, USACOM Joint Warfighting Center's Newsletter, Vol. 6, No. 2, (Oct 98) : 7-10.

<sup>6</sup> Donald E. Ryan, Jr., "Implications of Information-Based Warfare," *Joint Force Quarterly* 6, (Autumn-Winter 94-95) : 114-116.

<sup>7</sup> MG Robert H. Scales, Jr., "Cycles of War," *Implementing National Military Strategy* Vol III, (Crs 4, Academic Year 99): 23-1-23-6.

<sup>8</sup> Robert R. Leonhard, *The Principles of War for the Information Age* (Novato, CA: Presidio Press, 1998), 3-50 & 243-262.

<sup>9</sup> SUN TZU, *The Art of War*, trans. Samuel B. Griffith (London: Oxford University Press, 1963), 77.

<sup>10</sup> BG Robert H. Scales, Jr., *Certain Victory: The U.S. Army in the Gulf War* (Washington, DC: Brassey's, 1994), 196-199.

<sup>11</sup> Dr. Richard W. Stewart, *A History of U.S. Army Combat Psychological Operations* (Ft. Bragg, NC: United States Army

Special Operations Command, Directorate of History and Museums, 1994), 13-18.

<sup>12</sup> Ibid, 20.

<sup>13</sup> Ibid, 21-44.

<sup>14</sup> Ibid, 45-231.

<sup>15</sup> Stephen Pease, *PSYWAR: Psychological Warfare in Korea, 1950-1953* (Harrisburg, PA: Stackpole Books, 1992), 5-9.

<sup>16</sup> Andrew F. Krepinevich, Jr., *The Army and Vietnam* (Baltimore, MD: Jones Hopkins University Press, 1986), 232-233, *passim*.

<sup>17</sup> Major Jack N. Summe, "PSYOP Support to Operation Desert Storm," *Special Warfare Magazine*, (October 1992) and BG Robert H. Scales, Jr., *Certain Victory: The U.S. Army in the Gulf War* (Washington, DC: Brassey's, 1994), 196-199.

<sup>18</sup> LCDR Andy Wilde, USN, "Update: Information Operations," *A Common Perspective*, USACOM Joint Warfighting Center's Newsletter, Vol. 6, No. 2, (Oct 98) : 7.

<sup>19</sup> COL Jeffrey B. Jones and LTC Michael P. Matthews, "PSYOP and the Warfighting CINC," *Joint Forces Quarterly* (Summer 1995) : 29-31.

<sup>20</sup> H. Allen Holmes & General Peter J. Schoomaker, "Posture Statement," *U.S. Special Operations Command* (1998) : 55-98.

<sup>21</sup> *Strategic Review, 1995-96*. "Strategic Policy Issues: Is There a Revolution in Military Affairs?" (Oxford University Press, 1996) 29-40 as reprinted in US Army War College AY1999 Readings, Course 2: *War, National Policy, & Strategy*, Vol V - Part A, (Carlisle Barracks, PA: DNSS, 1988), 259.

<sup>22</sup> William J. Clinton, *A National Security Strategy for a New Century* (Washington, DC: The White House, 1997), 5.

<sup>23</sup> Donald E. Nuechterlein, *America Overcommitted: United States National Interest in the 1980s* (University Press of Kentucky, 1985) as reprinted in US Army War College AY1999

Readings, Course 2: *War, National Policy, & Strategy*, Vol I, (Carlisle Barracks, PA: DNSS, 1988), 143-155.

<sup>24</sup> Ryan Henry and C. Edward Peartree, "Military Theory and Information Warfare," *Parameters* Vol. 28, No. 3 (Autumn 1998) : 123-126, 130.

<sup>25</sup> Joint Chiefs of Staff. *Joint Publication 1-02: DoD Dictionary of Military and Associated Terms*. (Washington, DC: US Government Printing Office, 1996) [Online version] available at <http://www.dtic.mil/doctrine/jel/DoDDict/>.

<sup>26</sup> Ibid, available at  
<http://www.dtic.mil/doctrine/jel/DoDDict/>.

<sup>27</sup> Hans Binnendijk; David C. Gompert; James L. Zackrison; eds. 1998 *Strategic Assessment: Engaging Power for Peace*, (Washington, DC: Institute for Strategic Studies, 1998) 3-4 and Stephen Metz, *Strategic Horizons: The Military Implications of Alternative Futures*, (Carlisle Barracks, PA: Strategic Studies Institute, 1997) 3. Although the 1998 Strategic Appraisal alludes to four "tiers" or forms that future states might take, a quick analysis of the four indicates that two forms, *rogue states and failing states*, roughly combine to equate to Metz's third tier of endemically violent states.

<sup>28</sup> Stephen Metz, *Strategic Horizons: The Military Implications of Alternative Futures*, (Carlisle Barracks, PA: Strategic Studies Institute, 1997) 13-14.

<sup>29</sup> William J. Clinton, *A National Security Strategy for a New Century* (Washington, DC: The White House, 1997), 14.

<sup>30</sup> Hans Binnendijk; David C. Gompert; James L. Zackrison; eds. 1998 *Strategic Assessment: Engaging Power for Peace*, (Washington, DC: Institute for Strategic Studies, 1998) 33-34, 162-163, and 183-184.

<sup>31</sup> William S. Cohen, *Report of the Quadrennial Defense Review* (Washington, DC: US Government Printing Office, 1997) 50-51.

<sup>32</sup> *Report of the National Defense Panel*, "Transforming Defense: National Security in the 21<sup>st</sup> Century," by Philip A. Odeon, Chairman (Washington, DC: US Government Printing Office, 1997) v, 13-14, 25, 41, and 44-45.

<sup>33</sup> Department of Defense, Joint Chiefs of Staff, *Joint Publication 3-13: Joint Doctrine for Information Operations*, (Washington, DC: US Government Printing Office, 1998), II-3, II-4.

<sup>34</sup> Joint Chiefs of Staff. *Joint Publication 1-02: DoD Dictionary of Military and Associated Terms*. (Washington, DC: US Government Printing Office, 1996) [Online version] available at <http://www.dtic.mil/doctrine/jel/DoDdict/>.

<sup>35</sup> Ibid, available at  
<http://www.dtic.mil/doctrine/jel/DoDdict/>.

<sup>36</sup> Joint Chiefs of Staff. *Joint Publication 1-02: DoD Dictionary of Military and Associated Terms*. (Washington, DC: US Government Printing Office, 1996) [Online version] available at <http://www.dtic.mil/doctrine/jel/DoDdict/>.

<sup>37</sup> Department of Defense, Joint Chiefs of Staff, *Joint Publication 3-53: Doctrine for Joint Psychological Operations*, (Washington, DC: US Government Printing Office, 1993), III-4.

<sup>38</sup> SUN TZU, *The Art of War*, trans. Samuel B. Griffith (London: Oxford University Press, 1963), 77.

<sup>39</sup> B.H. Liddell Hart, In his forward to Samuel B. Griffith's book, *SUN TZU: The Art of War* (London: Oxford University Press, 1963), vii.

<sup>40</sup> Robert H. Leonhard, *The Principles of War for the Information Age*, (Novato, CA: Presidio Press, 1998), 211, 222.

## BIBLIOGRAPHY

Bentz, Colonel Harold F., Jr., "Senior Officer Debriefing Report," Commander, 7<sup>th</sup> Psychological Operations Group, Okinawa, 30 Nov 68 - 16 May 72.

Binnendijk, Hans; Gompert, David C.; Zackrison, James L.; eds. *1998 Strategic Assessment: Engaging Power for Peace.* Washington, DC: Institute for Strategic Studies, 1998.

Bowers, Stephen R. "Information Warfare: The Computer Revolution is Altering How Future Wars will be Conducted," *Armed Forces Journal* Vol 136, No 1 (August 1998).

Clinton, William J. *A National Security Strategy for a New Century.* Washington, DC: The White House, 1997.

Cohen, William S. *Report of the Quadrennial Defense Review.* Washington, DC: US Government Printing Office, 1997.

Department of Defense, Joint Chiefs of Staff. *Joint Publication 1-02: DoD Dictionary of Military and Associated Terms.* Washington, DC: US Government Printing Office, 1996.

Department of Defense, Joint Chiefs of Staff. *Joint Publication 3-13: Joint Doctrine for Information Operations.* Washington, DC: US Government Printing Office, 1998.

Department of Defense, Joint Chiefs of Staff. *Joint Publication 3-53: Doctrine for Joint Psychological Operations.* Washington, DC: US Government Printing Office, 1993.

Department of Defense, Joint Chiefs of Staff. *Joint Vision 2010.* Washington, DC: US Government Printing Office, 1996.

Dupuy, Trevor. *Future Wars.* London: Sidgwick & Jackson, 1992.

Goldstein, Colonel Frank L., Findley, Benjamin F., and Sands, Thomas P., eds. *Psychological Operations: Principles and Case Studies.* Tampa, FL: U.S. Special Operations Command, 1992.

Griffith, Samuel B, trans. *SUN TZU: The Art of War.* London: Oxford University Press, 1963.

Ostrovsky, Victor. *By Way of Deception.* New York, NY: St. Marten's Press, 1990.

- Johnson, Richard Denis. *PSYOP, The Gulf Paper War: Psychological Warfare Operations Against the Iraqi Military and Civilian Establishments Between November 1990 and February 1991*. Titusville, FL, 1992.
- Jones, Jeffrey B. and Michael P. Matthews. "PSYOP and the Warfighting CINC," *Joint Forces Quarterly*, (Summer 1995).
- Kilgore, Major Joe E. "PSYOP is Support of Low-Intensity Conflict," *Special Warfare Magazine*, (October 1992).
- Krepinevich, Andrew F., Jr. *The Army and Vietnam*. Baltimore, MD: Johns Hopkins University Press, 1986.
- Leonhard, Robert H. *The Principles of War for the Information Age*. Novato, CA: Presidio Press, 1998.
- Metz, Stephen. *Strategic Horizons: The Military Implications of Alternative Futures*. Carlisle Barracks, PA: Strategic Studies Institute, 1997.
- Nuechterlein, Donald E. *America Overcommitted: United States National Interest in the 1980s*. University Press of Kentucky, 1985 as reprinted in US Army War College AY1999 Readings, Course 2: *War, National Policy, & Strategy*, Vol I. Carlisle Barracks, PA: DNSS, 1988.
- Noll, James P., "The 13<sup>th</sup> Psychological Operations Battalion (EPW) During Mobilization, Desert Shield/Desert Storm and Demobilization," *U.S. Army War College Student Papers*, Report No. AD-A264 579, 1991.
- Pease, Stephen E. *PSYWAR: Psychological Warfare in Korea, 1950-1953*. Harrisburg, PA: Stackpole Books, 1992.
- Radvanyi, Janos, ed. *Psychological Operations and Political Warfare in Long-term Strategic Planning*. New York, NY: Praeger, 1990.
- Report of the National Defense Panel, "Transforming Defense: National Security in the 21<sup>st</sup> Century," by Philip A. Odeon, Chairman*. Washington, DC: US Government Printing Office, 1997.
- Ryan, Donald E., Jr. "Implications of Information-Based Warfare." *Joint Force Quarterly* 6, (Autumn-Winter 94-95) : 114-116.

Ryan Henry and C. Edward Peartree. "Military Theory and Information Warfare," *Parameters* Vol. 28, No. 3.. Autumn 1998, 123-126.

Scales, BG Robert H., Jr. *Certain Victory: The U.S. Army in the Gulf War.* McLean, VA: Brassey's Inc., 1994.

Scales, MG Robert H., Jr., "Cycles of War," *Implementing National Military Strategy* Vol III, (Crs 4, Academic Year 99) : 23-1 - 23-6.

Schwartzau, Winn. *Information Warfare: Chaos on the Electronic Superhighway.* New York, NY: Thunder's Mouth Press, 1994.

*Strategic Review, 1995-96.* "Strategic Policy Issues: Is There a Revolution in Military Affairs?" Oxford University Press, 1996 as reprinted in US Army War College AY1999 Readings, Course 2: War, National Policy, & Strategy, Vol V - Part A. Carlisle Barracks, PA: DNSS, 1988.

Stewart, Dr. Richard W., *The History of U.S. Army Combat Psychological Operations.* Ft. Bragg, NC: U.S. Army Special Operations Command, Directorate of History and Museums.

Summe, Major Jack N., "PSYOP Support to Operation Desert Storm," *Special Warfare Magazine*, (October 1992).

Summe, Major Jack N., "Total PSYOP Integration: Reorganizing Active and Reserve PSYOP Forces," *Special Warfare Magazine*, (October 1992).

Toffler, Alvin. *The Third Wave.* New York, NY: Bantam Books, 1981.

U.S. Special Operations Command. *Psychological Operations During Desert Shield/Storm: A Post-Operational Analysis*, by Colonel James Selders, et al.

U.S. Army Special Warfare Center & School. *Psychological Operations in Support of Unconventional Warfare: Final Study*, by the Combat Developments Office, Fort Bragg, NC, 1960.

Wilde, LCDR Andy, USN. "Update: Information Operations." A Common Perspective, USACOM Joint Warfighting Center's Newsletter, Vol. 6, No. 2, (Oct 98) : 7-10.